

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A coolant comprising:
a first component; and
a second component ~~held by holding members and~~ dispersed in the first component in a state of being held by holding members, the second component changes phase in order to absorb a predetermined amount of heat.
2. (Cancelled)
3. (Previously Presented) The coolant according to claim 1, wherein the second component changes from a solid phase to a liquid phase in order to absorb the predetermined amount of heat.
4. (Currently Amended) The coolant according to claim 1, wherein the second component is the same substance as the first component, and is provided in a different phase than the first component.
5. (Previously Presented) The coolant according to claim 1, wherein the second component is a different substance than the first component and is provided in a phase that is different from a phase of the first component.
6. (Cancelled)
7. (Previously Presented) The coolant according to claim 1, wherein the second component absorbs the predetermined amount of heat without changing temperature.
8. (Original) The coolant according to claim 1, wherein the second component has a higher heat capacity than the first component.
9. - 10. (Cancelled)

11. (Original) The coolant according to claim 8, wherein the second component is a gel.

12. (Cancelled)

13. (Previously Presented) The coolant according to claim 1, wherein the holding members are hollow with the second component located therein.

14. (Previously Presented) The coolant according to claim 1, wherein the holding members contain grooves with the second component located in the grooves.

15. (Previously Presented) The coolant according to claim 1, wherein the holding members contain pores with the second component located in the pores.

16. (Previously Presented) The coolant according to claim 1, wherein the holding members are formed of magnetic bodies.

17. (Previously Presented) The coolant according to claim 1, wherein the second component changes from a liquid phase to a gas phase in order to absorb the predetermined amount of heat.

18. - 23. (Cancelled)

24. (Currently Amended) A method of cooling an object comprising:
circulating a coolant past the object, wherein the coolant includes a first component and a second component ~~which is held by holding members and~~ dispersed in the first component in a state of being held by holding members, the second component changes phase in order to absorb a predetermined amount of heat.

25. (Original) The method according to claim 24, further comprising removing heat from at least the second component after the coolant has been circulated past the object, so as to maintain the coolant at a predetermined temperature.

26. (Previously Presented) The method according to claim 25, wherein the step of removing heat from the second component changes the phase of the second component.

27. (Original) The method according to claim 26, wherein the second component changes from a solid phase to a liquid phase in order to absorb the predetermined amount of heat, and the step of removing heat from the second component changes the second component back into the solid phase.

28. (Original) The method according to claim 26, wherein second component is the same substance as the first component, and is provided in a different phase than the first component after the step of removing heat from the second component is performed.

29. (Original) The method according to claim 26, wherein the second component is a different substance than the first component and is provided in a phase that is different from a phase of the first component after the step of removing heat from the second component is performed.

30. (Cancelled)

31. (Previously Presented) The method according to claim 24, wherein the second component absorbs the predetermined amount of heat without changing temperature.

32. (Original) The method according to claim 24, wherein the second component has a higher heat capacity than the first component.

33. - 34. (Cancelled)

35. (Original) The method according to claim 32, wherein the second component is a gel.

36. (Cancelled)

37. (Previously Presented) The method according to claim 24, wherein the holding members are hollow with the second component located therein.

38. (Previously Presented) The method according to claim 24, wherein the holding members contain grooves with the second component located in the grooves.

39. (Previously Presented) The method according to claim 24, wherein the holding members contain pores with the second component located in the pores.

40. (Original) The method according to claim 24, wherein the object to be cooled is a coil of a linear motor device having a housing with an internal space in which the coil is disposed, and a cooling system which cools the coil by circulating the coolant past the coil, the method further comprising:

mixing the second component with the first component; and

supplying the mixed coolant to the internal space of the housing using a pump.

41. (Original) The method according to claim 40, wherein the mixing includes setting a mixing ratio of the first component to the second component according to an amount of heat generated by the coil.

42. (Original) The method according to claim 40, wherein the linear motor device is part of a stage device.

43. (Original) The method according to claim 42, wherein the stage device is part of an exposure apparatus provided with a mask stage for holding a mask and a substrate stage for supporting a substrate, wherein the stage device is used for at least one of the mask stage and the substrate stage.

44. (Currently Amended) A cooling device, comprising:
a holding member, the holding member having at least one of a hollow part, a groove, and a pore, and capable of existing dispersedly in a liquid; and

a cooling substance which absorbs an amount of heat due to a phase change between at least two of a solid phase, a liquid phase, and a gas phase, wherein the cooling substance is held in the at least one of the hollow part, the groove and the pore of the holding member.

45. (Original) The cooling device according to claim 44, wherein an internal pressure of the holding member is set based on a target phase change temperature of the cooling substance.

46. (Original) The cooling device according to claim 44, wherein the holding member is a magnetic body.

47. (Original) The cooling device according to claim 44, wherein the cooling substance is a gel.

48. (Original) A coolant, wherein the cooling device according to claim 44 is dispersed in a specified liquid.

49. (Original) The coolant according to claim 48, wherein the specified liquid is a different substance than the cooling substance.

50. (Original) The coolant according to claim 48, wherein the specified liquid is a same substance as the cooling substance.

51. (Original) The cooling device according to claim 44, wherein the holding member is provided with an internal space for holding at least the cooling substance, and a through-hole which connects an outside of the holding member and the internal space.

52. (Original) The cooling device according to claim 51, wherein the internal space is a hollow part formed inside the holding member and the cooling substance is held in the hollow part.

53. (Original) The cooling device according to claim 51, wherein the holding member is formed of a porous material, wherein the internal space is the space within at least one pore of the porous holding member and the holding member holds the cooling substance inside the pores.

54. (Original) A method of cooling an object, comprising:

holding a cooling substance with a holding member; and

dispersing the holding member in a specified liquid, wherein the cooling substance absorbs an amount of heat from a surrounding by undergoing a phase change between at least two of a solid phase, a liquid phase, and a gas phase to cool the object.

55. (Previously Presented) A method of cooling an object, comprising:

cooling the object by exposing the object to a coolant that is comprised of a specified liquid in which holding members are dispersed, the holding members having an internal space that is in communication with an outside of the holding members and a cooling substance located in the internal space, wherein the cooling substance absorbs an amount of heat from the object by undergoing a phase change between at least two of a solid phase, a liquid phase, and a gas phase.

56. (Original) The cooling method according to claim 55, wherein the cooling substance exists in at least two different ones of the solid state, the liquid state, and the gaseous state.

57. (Original) The cooling method according to claim 56, wherein the specified liquid is the cooling substance in the liquid state and the cooling substance held by the holding member is the cooling substance in the solid state.

58. (Original) The cooling method according to claim 56, wherein the coolant absorbs heat of the object without increasing a temperature of the cooling substance when the cooling substance in the solid state is changed to a liquid state.

59. - 71. (Cancelled)

72. (Currently Amended) A coolant comprising:

a first component; and

a second component ~~held by holding members and~~ dispersed in the first component in a state of being held by holding members, the second component has a higher heat capacity than the first component.

73. (Previously Presented) The coolant according to claim 72, wherein the second component absorbs a predetermined amount of heat without changing temperature.

74. (Previously Presented) The coolant according to claim 72, wherein the second component does not change phase when the second component absorbs the predetermined amount of heat.

75. (Previously Presented) The coolant according to claim 72, wherein the second component is a gel.

76. (Previously Presented) The coolant according to claim 72, wherein the holding members are hollow with the second component located therein.

77. (Previously Presented) The coolant according to claim 72, wherein the holding members contain grooves with the second component located in the grooves.

78. (Previously Presented) The coolant according to claim 72, wherein the holding members contain pores with the second component located in the pores.

79. (Previously Presented) The coolant according to claim 72, wherein the holding members are formed of magnetic bodies.

80. (Currently Amended) A method of cooling an object comprising:
circulating a coolant past the object, wherein the coolant includes a first component and a second component ~~which is held by holding members and~~ dispersed in the first component in a state of being held by holding members, the second component has a higher heat capacity than the first component.

81. (Previously Presented) The method according to claim 80, further comprising removing heat from at least the second component after the coolant has been circulated past the object, so as to maintain the coolant at a predetermined temperature.

82. (Previously Presented) The method according to claim 80, wherein the second component is a gel.

83. (Previously Presented) The method according to claim 80, wherein the holding members are hollow with the second component located therein.

84. (Previously Presented) The method according to claim 80, wherein the holding members contain grooves with the second component located in the grooves.

85. (Previously Presented) The method according to claim 80, wherein the holding members contain pores with the second component located in the pores.

86. (Previously Presented) The method according to claim 80, wherein the object to be cooled is a coil of a linear motor device having a housing with an internal space in which the coil is disposed, and a cooling system which cools the coil by circulating the coolant past the coil, the method further comprising:

mixing the second component with the first component; and

supplying the mixed coolant to the internal space of the housing using a pump.

87. (Previously Presented) The method according to claim 86, wherein the mixing includes setting a mixing ratio of the first component to the second component according to an amount of heat generated by the coil.

88. (Previously Presented) The method according to claim 86, wherein the linear motor device is part of a stage device.

89. (Previously Presented) The method according to claim 88, wherein the stage device is part of an exposure apparatus provided with a mask stage for holding a mask and a substrate stage for supporting a substrate, wherein the stage device is used for at least one of the mask stage and the substrate stage.

90. (Previously Presented) A method of cooling a coil of a linear motor device having a housing with an internal space in which the coil is disposed, the method comprising:

circulating a coolant past the coil, wherein the coolant includes a first component and a second component dispersed in the first component, the second component has a higher heat capacity than the first component;

mixing the second component with the first component; and

supplying the mixed coolant to the internal space of the housing using a pump.

91. (Previously Presented) The method according to claim 90, wherein the mixing includes setting a mixing ratio of the first component to the second component according to an amount of heat generated by the coil.

92. (Previously Presented) The method according to claim 90, wherein the linear motor device is part of a stage device.

93. (Previously Presented) The method according to claim 92, wherein the stage device is part of an exposure apparatus provided with a mask stage for holding a mask and a substrate stage for supporting a substrate, wherein the stage device is used for at least one of the mask stage and the substrate stage.

94. (Previously Presented) A method of cooling a coil of a linear motor device having a housing with an internal space in which the coil is disposed, the method comprising:

circulating a coolant past the coil, wherein the coolant includes a first component and a second component dispersed in the first component, the second component changes phase in order to absorb a predetermined amount of heat;

mixing the second component with the first component; and

supplying the mixed coolant to the internal space of the housing using a pump.

95. (Previously Presented) The method according to claim 94, wherein the mixing includes setting a mixing ratio of the first component to the second component according to an amount of heat generated by the coil.

96. (Previously Presented) The method according to claim 94, wherein the linear motor device is part of a stage device.

97. (Previously Presented) The method according to claim 96, wherein the stage device is part of an exposure apparatus provided with a mask stage for holding a mask and a substrate stage for supporting a substrate, wherein the stage device is used for at least one of the mask stage and the substrate stage.